

Quanxi JIA

Peer reviewed journal publications > 380

Nanoscience Related Publications

(Selected peer reviewed journal articles)

- Q. Lin, Y. Xu, E. G. Fu, S. Baber, Z. Bao, L. Yu, S. G. Deng, J. Kundu, J. Hollingsworth, E. Bauer, T. M. McCleskey, A.. K. Burrell, Q. X. Jia, and H. M. Luo, "Polymer-assisted chemical solution approach to $\text{YVO}_4:\text{Eu}$ nanoparticle networks," *J. Mater. Chem.* **22**, 5835 (2012).
- S. A. Harrington, J. Zhai, S. Denev, V. Gopalan, H. Wang, Z. Bi, S. A. T. Redfern, S. H. Baek, C. W. Bark, C. B. Eom, Q. X. Jia, M. E. Vickers, and J. L. MacManus-Driscoll, "Thick lead-free ferroelectric films with high Curie temperatures through nanocomposite-induced strain," *Nature Nanotechnology* **6**, 491 (2011).
- S. M. Baber, Q. L. Lin, G. F. Zou, N. Haberkorn, S. A. Baily, H. Wang, Z. Bi, H. Yang, S. Deng, S. Zollner, M. E. Hawley, L. Civale, E. Bauer, T. M. McCleskey, A. K. Burrell, Q. X. Jia, and H. M. Luo, "Magnetic properties of self-assembled epitaxial nanocomposite $\text{CoFe}_2\text{O}_4:\text{SrTiO}_3$ and $\text{CoFe}_2\text{O}_4:\text{MgO}$ films," *J. Phys. Chem. C* **115**, 25338 (2011).
- Y. Y. Zhang, N. Haberkorn, F. Ronning, H. Wang, N. A. Mara, M. Zhuo, C. Li, J. H. Lee, K. J. Blackmore, E. Bauer, A. K. Burrell, T. M. McCleskey, M. E. Hawley, R. K. Schulze, L. Civale, T. Tajima, and Q. X. Jia, "Structure and superconducting property of epitaxial δ -MoN films by a chemical solution method," *J. Am. Chem. Soc.* **133**, 20735 (2011).
- I. S. Byun, D. Yoon, J. S. Choi, I. Hwang, D. H. Lee, M. J. Lee, T. Kawai, Y. W. Son, Q. X. Jia, H. Cheong, and B. H. Park, "Nanoscale lithography on monolayer graphene using hydrogenation and oxidation," *ACS Nano* **5**, 6417 (2011).
- A. Chen, Z. Bi, H. Hazariwala, X. Zhang, Q. Su, Li Chen, Q. X. Jia, J. L. MacManus-Driscoll, and H. Wang., "Microstructure, magnetic, and low-field magnetotransport properties of self-assembled $(\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3)_{0.5}:(\text{CeO}_2)_{0.5}$ vertically aligned nanocomposite thin films," *Nanotechnology* **22**, 315712 (2011).
- G. Zou, H. Luo, S. Baily, Y. Zhang, N. Haberkorn, J. Xiong, E. Bauer, T. McCleskey, A. Burrell, L. Civale, Y. T. Zhu, J. L. MacManus-Driscoll, and Q. X. Jia, "Highly aligned carbon nanotube forests coated by superconducting NbC," *Nature Communications* **2**, 248 (2011).
- A. Chen, Z. Bi, C. F. Tsai, J. H. Lee, Q. Su, X. Zhang, Q. X. Jia, J. L. MacManus-Driscoll, and H. Wang., "Tunable low-field magnetoresistance in $(\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3):(\text{ZnO})_{0.5}$ self-assembled vertically aligned nanocomposite thin films," *Adv. Funct. Mater.* **21**, 2423 (2011).
- W. Liu, X. H. Zhang, G. Xu, P. D. Bradford, X. Wang, H. B. Zhao, Y. Y. Zhang, Q. X. Jia, F. G. Yuan, Q. W. Li, Y. P. Qiu, and Y. T. Zhu, "Producing superior composites by

- winding carbon nanotubes onto a mandrel under a poly(vinyl alcohol) spray," *Carbon* **49**, 4786 (2011).
- J. S. Lee, Y. M. Kim, J. H. Kwon, J. S. Sim, H. Shin, B. H. Sohn, and Q. X. Jia, "Multilevel data storage memory devices based on the controlled capacitive coupling of trapped electrons," *Adv. Mater.* **23**, 2064 (2011).
 - B. H. Park, Y. R. Li, J. Xiong, and Q. X. Jia, "Dielectric properties of epitaxial $\text{Ba}_{1-x}\text{Sr}_x\text{TiO}_3$ films on MgO substrates," *Functional Mater. Lett.* **4**, 41 (2011).
 - R. Singh, A. K. Azad, Q. X. Jia, A. J. Taylor, and H. T. Chen, "Thermal tunability in terahertz metamaterials fabricated on strontium titanate single crystal substrates," *Optics Lett.* **36**, 1230 (2011).
 - Z. Bi, A. Chen, H. Wang, E. Weal, J. L. MacManus-Driscoll, H. Luo, and Q. X. Jia, "Microstructure and magnetic properties of $(\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3)_{0.7}:(\text{Mn}_3\text{O}_4)_{0.3}$ nanocomposite thin films", *J. Appl. Phys.* **109**, 054302 (2011).
 - X. L. Li, J. D. Thompson, Y. Y. Zhang, C. I. Brady, G. Zou, N. H. Mack, D. Williams, J. G. Duque, Q. X. Jia, and S. K. Doorn, "Efficient synthesis of tailored magnetic carbon nanotubes via a noncovalent chemical route," *Nanoscale* **3**, 668 (2011).
 - E. M. Choi, S. Patnaik, E. Weal, S. L. Sahonta, H. Wang, Z. Bi, J. Xiong, M. G. Blamire, Q.X. Jia, and J. L. MacManus-Driscoll, "Strong room temperature magnetism in highly resistive strained thin films of $\text{BiFe}_{0.5}\text{Mn}_{0.5}\text{O}_3$," *Appl. Phys. Lett.* **98**, 012509 (2011).
 - P. D. Bradford, X. Wang, H. B. Zhao, J. P. Maria, Q. X. Jia, and Y. T. Zhu, "A novel approach to fabricate high volume fraction nanocomposites with long aligned carbon nanotubes," *Composites Sci. & Technol.* **70**, 1980 (2010).
 - H. T. Chen, H. Yang, R. Singh, J. F. O'Hara, A. K. Azad, S. A. Trugman, Q. X. Jia, and A. J. Taylor, "Tuning the resonance in high-temperature superconducting terahertz metamaterials," *Phys. Rev. Lett.* **105**, 247402 (2010).
 - G. Zou, H. M. Luo, Y. Y. Zhang, J. Xiong, Q. Wei, M. Zhuo, J. Zhai, H. Wang, D. Williams, N. Li, E. Bauer, X. H. Zhang, T. M. McCleskey, Y. R. Li, A. K. Burrell, and Q. X. Jia, "A chemical solution approach for superconducting and hard epitaxial NbC film," *ChemComm.* **46**, 7837 (2010).
 - H. Zhao, P. D. Bradford, X. Wang, W. Liu, T. J. M. Luo, Q. X. Jia, Y. T. Zhu, and F. G. Yuan, "An intermetallic Fe-Zr catalyst used for growing long carbon nanotube arrays," *Mater. Lett.* **64**, 1947 (2010).
 - Z. Bi, O. Anderoglu, X. Zhang, J. L. MacManus-Driscoll, H. Yang, Q. X. Jia, and H. Wang, "Nanoporous Thin Films with Controlable Nanopores Processed from Vertically Aligned Nanocomposites," *Nanotechnology* **21**, 285606 (2010).
 - H. Zhao, Y. Y. Zhang, P. D. Bradford, Q. Zhou, Q. X. Jia, F. G. Yuan, and Y. T. Zhu, "Carbon nanotube yarn strain sensors," *Nanotechnology* **21**, 305502 (2010).

- Y. Y. Zhang, C. J. Sheehan, J. Y. Zhai, G. F. Zou, H. M. Luo, J. Xiong, Y. T. Zhu, and Q. X. Jia, "Polymer-embedded carbon nanotube ribbons for stretchable conductors," *Adv. Mater.* **22**, 3027-3031 (2010).
- S. Baber, M. Zhou, Q. L. Lin, M. Naalla, Q. X. Jia, Y. Lu, and H. M. Luo, "Nanoconfined surfactant templated electrodeposition to porous hierarchical nanowires and nanotubes," *Nanotechnology* **21**, 165603 (2010).
- Y. Lin, C. Dai, Y. R. Li, X. Chen, C. L. Chen, A. Bhalla, and Q. X. Jia, "Strain relaxation in epitaxial (Pb,Sr)TiO₃ thin films on NdGaO₃ substrates," *Appl. Phys. Lett.* **96**, 102901 (2010).
- Y. Y. Zhang, C. J. Sheehan, J. Y. Zhai, G. F. Zou, H. M. Luo, J. Xiong, Y. T. Zhu, and Q. X. Jia, "Polymer-embedded carbon nanotube ribbons for stretchable conductors," *Adv. Mater.* **22**, 3027 (2010).
- G. F. Zou, M. K. Jain, H. Yang, Y. Y. Zhang, D. Williams, and Q. X. Jia, "Recyclable and electrically conducting carbon nanotube composite films," *Nanoscale* **2**, 418 (2010).
- H. Yang, Y. Q. Wang, H. Wang, and Q. X. Jia, "Oxygen concentration and its effect on the leakage current in BiFeO₃ thin films," *Appl. Phys. Lett.* **96**, 012909 (2010).
- G. Zou, H. Luo, F. Ronning, B. Sun, T. M. McCleskey, A. K. Burrell, E. Bauer, and Q. X. Jia, "Facile chemical solution deposition of high-mobility epitaxial germanium films on silicon," *Angew. Chem. Int. Ed.*, **49**, 1782 (2010).
- H. Peng, X. M. Sun, F. J. Cai, X. Chen, G. P. Liao, D. Y. Chen, Q. W. Li, Y. F. Lu, Y. T. Zhu, and Q. X. Jia, "Electrochromatic carbon nanotube/polydiacetylene nanocomposite fibers," *Nature Nanotechnology* **4**, 738 (2009).
- Y. Y. Zhang, G. Zou, S. K. Doorn, H. Htoon, L. Stan, M. E. Hawley, C. J. Sheehan, Y. T. Zhu, and Q. X. Jia, "Tailoring the morphology of carbon nanotube arrays: from spinnable forests to undulating foams," *ACS Nano* **3**, 2157 (2009).
- H. Yang, H. Wang, B. Maiorov, J. Lee, D. Talbayev, M. J. Hinton, D. M. Feldmann, J. L. MacManus-Driscoll, A. J. Taylor, L. Civale, T. R. Lemberger, and Q. X. Jia, "Self-assembled multilayers and enhanced superconductivity in (YBa₂Cu₃O_{7-x})_{0.5}:(BaZrO₃)_{0.5} nanocomposite films," *J. Appl. Phys.* **106**, 093914 (2009).
- Z. Bi, J. W. Lee, H. Wang, H. Yang, Q. X. Jia, and J. L. MacManus-Driscoll, "Tunable lattice strain in vertically aligned nanocomposite (BiFeO₃)_x(Sm₂O₃)_{1-x} thin films," *J. Appl. Phys.* **106**, 094309 (2009).
- P. Beaud, S. L. Johnson, E. Vorobeva, U. Staub, C. J. Milne, Q. X. Jia, and G. Ingold, "An Ultrafast structural phase transition driven by photo-induced melting of charge and orbital order," *Phys. Rev. Lett.* **103**, 155702 (2009).
- Y. Y. Zhang, L. Stan, P. Xu, H. L. Wang, S. K. Doorn, H. Htoon, Y. T. Zhu, and Q. X. Jia, "A double-layered carbon nanotube array with super-hydrophobicity," *Carbon* **47**, 3332 (2009).

- H. M. Luo, H. Wang, Z. X. Bi, G. F. Zou, T. M. McCleskey, A. K. Burrell, E. Bauer, M. E. Hawley, Y. Lin, S. A. Baily, L. Civale, Y. Q. Wang, and Q. X. Jia, "Highly conductive layered ternary transition metal-nitride films," *Angew. Chem. Int. Ed.* **121**, 1518 (2009).
- H. Yang, H. Wang, J. Yoon, Y. Q. Wang, M. Jain, D. M. Feldmann, P. C. Dowden, J. L. MacManus-Driscoll, and Q. X. Jia, "Vertical interface effect on the physical properties of self-assembled nanocomposite epitaxial films," *Adv. Mater.* **21**, 3794 (2009).
- A. Fouchet, H. Wang, H. Yang, J. Yoon, Q.X. Jia, and J. L. MacManus-Driscoll, "Spontaneous ordering, strain control and multifunctionality in vertical nanocomposite heteroepitaxial films," *IEEE Trans. Ultrasonics, Ferroelectrics, and Frequency Control* **56**, 1534 (2009).
- H. M. Luo, Y. Lin, H. Wang, J. H. Lee, N. A. Suvorova, A. H. Mueller, A. K. Burrell, T. M. McCleskey, E. Bauer, I. O. Usov, M. E. Hawley, T. G. Holesinger, and Q. X. Jia, "A chemical solution approach to epitaxial metal nitride thin films," *Adv. Mater.* **21**, 193 (2009).
- S. C. Wimbush, M. Li, M. E. Cickers, B. Maiorov, D. M. Feldmann, Q. X. Jia, and J. L. MacManus-Driscoll, "Interfacial strain-induced oxygen disorder as the cause of enhanced critical current density in superconducting thin films," *Adv. Funct. Mater.* **19**, 835 (2009).
- E. Bauer, A. H. Mueller, I. Usov, N. Suvorova, M. T. Janicke, G. I. N. Waterhouse, M. R. Waterland, Q. X. Jia, A. K. Burrell, and T. M. McCleskey, "Chemical solution route to conformal phosphor coatings on nanostructures," *Adv. Mater.* **20**, 4704 (2008).
- J. L. MacManus-Driscoll, P. Zerrer, H. Wang, H. Yang, J. Yoon, S. R. Foltyn, M. G. Blamire, and Q. X. Jia, "Spontaneous ordering, strain control and manipulation in vertical nanocomposite heteroepitaxial films," *Nature Materials* **7**, 314 (2008).
- G. Sheng, J. X. Zhang, Y. L. Li, S. Choudhury, Q. X. Jia, Z. K. Liu, and L. Q. Chen, "Misfit strain – misfit strain diagram of epitaxial BaTiO₃ thin films: thermodynamic calculations and phase-field simulations," *Appl. Phys. Lett.* **93**, 232904 (2008).
- G. Sheng, J. X. Zhang, Y. L. Li, S. Choudhury, Q. X. Jia, Z. K. Liu, and L. Q. Chen, "Domain stability of PbTiO₃ thin films under anisotropic misfit strains: phase-field simulations," *J. Appl. Phys.* **104**, 054105 (2008).
- H. Yang, H. Wang, G. F. Zou, M. Jain, N. A. Suvorova, D. M. Feldmann, P. C. Dowden, R. F. DePaula, J. L. MacManus-Driscoll, A. J. Taylor, and Q. X. Jia, "Leakage mechanisms of self-assembled (BiFeO₃)_{0.5}:(Sm₂O₃)_{0.5} nanocomposite films," *Appl. Phys. Lett.* **93**, 142904 (2008).
- H. M. Luo, H. Wang, Z. X. Bi, D. M. Feldmann, Y. Q. Wang, A. K. Burrell, T. M. McCleskey, E. Bauer, M. E. Hawley, and Q. X. Jia, "Epitaxial ternary nitride thin films prepared by a chemical solution method," *J. Am. Chem. Soc.* **130**, 15224 (2008).
- H. S. Peng, D. Y. Chen, J. Y. Huang, S. B. Chikkannanavar, J. Hanisch, M. Jain, D. E. Peterson, S. K. Doorn, Y. F. Lu, Y. T. Zhu, and Q. X. Jia, "Strong and ductile colossal

- carbon tubes with walls of rectangular macro-pores," *Phys. Rev. Lett.* **101**, 145501 (2008).
- H. S. Peng, M. Jain, D. E. Peterson, Y. T. Zhu, and Q. X. Jia, "Composite carbon nanotube/silica fibers with improved mechanical strengths and electrical conductivities," *Small* **4**, 1964-1967 (2008).
 - J. X. Zhang, Y. L. Li, S. Choudhury, L. Q. Chen, Y. H. Chu, F. Zavaliche, M. P. Cruz, R. Ramesh, and Q. X. Jia, "Computer simulation of ferroelectric domain structures in epitaxial BiFeO₃ thin films," *J. Appl. Phys.* **103**, 094111 (2008).
 - S. Choudhury, Y. L. Li, L. Q. Chen, and Q. X. Jia, "Strain effect on coercive field of epitaxial barium titanate thin films," *Appl. Phys. Lett.* **92**, 142907 (2008).
 - A. K Burrell, T. M. McCleskey, and Q. X. Jia, "Polymer assisted deposition," *Chem. Commun.* **11**, 1271 (2008). (**feature article**)
 - A. Soukiassian, W. Tian, V. Vaithyanathan, J. H. Haeni, L. Q. Chen, X. X. Xi, D. G. Schlom, D. A. Tenne, H. P. Sun, X. Q. Pan, K. J. Choi, C. B. Eom, Y. L. Li, Q. X. Jia, C. Constantin, R. M. Feenstra, M. Bernhagen, P. Reiche, and R. Uecker, "Growth of nanoscale BaTiO₃/SrTiO₃ superlattices by molecular-beam epitaxy," *J. Mater. Res.* **23**, 1417 (2008).
 - H. S. Peng, M. Jain, Q. W. Li, D. E. Peterson, Y. T. Zhu, and Q. X. Jia, "Vertically-aligned pearl-like carbon nanotube arrays for fiber spinning," *J. Am. Chem. Soc.* **130**, 1130 (2008).
 - Y. L. Li, S. Y. Hu, D. A. Tenne, A. Soukiassian, D. G. Schlom, L. Q. Chen, X. X. Xi, K. J. Choi, C. B. Eom, A. Saxena, T. Lookman, and Q. X. Jia, "Interfacial coherency and ferroelectricity of BaTiO₃/SrTiO₃ superlattice films," *Appl. Phys. Lett.* **91**, 252904 (2007).
 - H. M. Luo, H. Yang, S. A. Baily, O. Ugurlu, M. Jain, M. Hawley, T. M. McCleskey, A. K. Burrell, E. Bauer, L. Civale, T. G. Holesinger, and Q. X. Jia, "Self-assembled epitaxial nanocomposite BaTiO₃-NiFe₂O₄ films prepared by polymer-assisted deposition," *J. Am. Chem. Soc.* **129**, 14132 (2007).
 - Q. W. Li, Y. Li, X. F. Zhang, S. B. Chikkannanavar, Y. H. Zhao, A. M. Dangelewicz, L. X. Zheng, S. K. Doorn, Q. X. Jia, D. E. Peterson, P. N. Arendt, and Y. T. Zhu, "Structure-dependent electronic properties of carbon nanotube fibers," *Adv. Mater.* **19**, 3358 (2007).
 - B. J. Talor, D. J. Scanderbeg, M. B. Maple, C. Kwon, and Q. X. Jia, "Role of quantum fluctuations in the vortex solid to vertex liquid transition of type-II superconductors," *Phys. Rev. B* **76**, 014518 (2007).
 - A. K Burrell, T. M. McCleskey, P. Shukla, H. Wang, E. M. Minogue, and Q. X. Jia, "Controlling oxidation-states in uranium-oxide through epitaxial stabilization," *Adv. Mater.* **19**, 3559 (2007).

- Y. L. Li, S. Y. Hu, D. A. Tenne, A. Soukiassian, D. G. Schlom, X. X. Xi, K. J. Choi, C. B. Eom, A. Saxena, T. Lookman, Q. X. Jia, and L. Q. Chen, "Prediction of ferroelectricity in BaTiO₃/SrTiO₃ superlattice with domains," *Appl. Phys. Lett.* **91**, 112914 (2007).
- L. X. Zheng, X. F. Zhang, Q. W. Li, S. B. Chikkannan, Y. Li, Y. H. Zhao, X. Z. Liao, Q. X. Jia, S. K. Doorn, D. E. Peterson, and Y. T. Zhu, "Carbon-nanotube cotton for large-scale fibers," *Adv. Mater.* **19**, 2567 (2007).
- H. Yang, M. Jain, N. A. Suvorova, H. Zhou, H. M. Luo, P. C. Dowden, R. F. DePaula, D. M. Feldmann, S. R. Foltyn, and Q. X. Jia, "Temperature dependent leakage mechanism of Pt/BiFeO₃/SrRuO₃ thin film capacitors," *Appl. Phys. Lett.* **91**, 072911 (2007).
- S. R. Foltyn, L. Civale, J. L. MacManus-Driscoll, Q. X. Jia, B. Moirov, H. Wang, and M. Maley, "Materials science challenges for high-temperature superconducting wire," *Nature Materials* **6**, 631 (2007). (**review article**)
- M. Krishnamurthi, M. Ramirez, S. Denev, V. Semak, T. Lehecka, J. Thomas, Q. X. Jia, and V. Gopalan, "Two dimensional dynamic focusing of laser by electro-optic ferroelectric domain lenses," *Appl. Phys. Lett.* **90**, 201106 (2007).
- T. G. Holesinger, Q. X. Jia, P. Dowden, S. Kreiskott, B. Maiorov, L. Civale, and B. Gibbons, "Ultra-fine multilayers of complex metal-oxide films," *Adv. Mater.* **19**, 1917 (2007).
- X. Zhang, Q. Li, Yi Tu, Y. Li, Y. Coulter, L. Zheng, Y. Zhao, Q. X. Jia, D. Peterson, and Y. T. Zhu, "Strong carbon nanotube fiber spun from long CNT array," *Small* **3**, 244 (2007).
- J. X. Zhang, Y. L. Li, F. Zavaliche, Q. X. Jia, D. G. Schlom, R. Ramesh, and L. Q. Chen, "Phase-field model for epitaxial ferroelectric and magnetic nanocomposite thin films," *Appl. Phys. Lett.* **90**, 052909 (2007).
- A. Vasudevarao, A. Kumar, L. Tian, J. H. Haeni, Y. L. Li, C. J. Eklund, Q. X. Jia, R. Uecker, P. Reiche, K. Rabe, L. Q. Chen, D. G. Schlom, and V. Gopalan, "Mutiferroic domain dynamics in strained strontium titanate," *Phys. Rev. Lett.* **97**, 257602 (2006).
- W. Li, Q. X. Jia, and H. L. Wang, "Facile synthesis of metal nanoparticles using conducting polymer colloids," *Polymer*, **47**, 23 (2006).
- D. A. Tenne, A. Bruchhausen, D. L. Kimura, A. Fainstein, R. Katiyar, A. Cantarero, A. Soukiassian, V. Vaithyanathan, J. H. Haeni, W. Tian, D. G. Schlom, C. E. Bom, H. P. Sun, X. Q. Pan, Y. L. Li, L. Q. Chen, Q. X. Jia, and X. X. Xi, "Nanoscale ferroelectricity in BaTiO₃/SrTiO₃ superlattices probed by ultraviolet Raman spectroscopy," *Science* **313**, 1614 (2006).
- J.-K. Lee, R. E. Muenchausen, J.-S. Lee, Q. X. Jia, M. Nastasi, J. Valdez, K. Sickafus, B. L. Bennett, D. W. Cooke, and S.Y. Lee, "Structure and optical properties of Lu₂SiO₅:Ce phosphor thin films," *Appl. Phys. Lett.* **89**, 101905 (2006).
- M. Jain, P. Shukla, Y. Li, M. Hawley, M. F. Hundley, A. K. Burrell, T. M. McCleskey, and Q. X. Jia, "High magnetoresistance near room temperature in La_{0.67}Ca_{0.33}MnO₃/

- $\text{La}_{0.66}\text{Sr}_{0.33}\text{MnO}_3$ multilayered films prepared by a solution technique," *Adv. Mater.* **18**, 2695 (2006).
- W. Tian, J. C. Jiang, X. Q. Pan, J. H. Haeni, Y. L. Li, L. Q. Chen, D. G. Schlom, J. B. Neaton, K. M. Rabe, and Q. X. Jia, "Structural evidence for enhanced polarization in a commensurate short-period $\text{BaTiO}_3/\text{SrTiO}_3$ superlattice," *Appl. Phys. Lett.* **89**, 092905 (2006).
 - Y. L. Li, S. Choudhury, J. H. Haeni, M. D. Biegalski, A. Vasudevarao, A. Sharan, H. Z. Ma, J. Levy, V. Gopalan, S. Trolier-McKinstry, D. G. Schlom, Q. X. Jia, and L. Q. Chen, "Phase transition and domain structures in strained pseudocubic (100) SrTiO_3 thin films," *Phys. Rev. B* **73**, 184112 (2006).
 - D. Lim, K. Thorsmolle, R. D. Averitt, A. J. Taylor, Q. X. Jia, K. H. Ahn, M. J. Graf, and S. A. Trugman, "Coherent optical and acoustic phonon generation correlated to charge ordering phase transition in $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$," *Phys. Rev. B* **71**, 1434403 (2005).
 - A. T. Findikoglu, W. Choi, V. Matias, T. G. Holesinger, Q. X. Jia, and D. E. Peterson, "Well-oriented, high-carrier-mobility silicon thin films on non-single-crystalline substrates," *Adv. Mater.* **17**, 1527 (2005).
 - Y. Lin, X. Chen, S. W. Liu, C. L. Chen, J. S. Lee, Y. Li, Q. X. Jia, and A. Bhalla, "Epitaxial nature and anisotropic dielectric properties of $(\text{Pb},\text{Sr})\text{TiO}_3$ thin films on NdGaO_3 substrates," *Appl. Phys. Lett.* **86**, 142902 (2005).
 - X. Qi, M. Wei, Y. Lin, Q. X. Jia, D. Zhi, J. Dho, M. Blamire, and J. L. MacManus-Driscoll, "High-resolution x-ray diffraction and transmission electron microscopy of multiferroic BiFeO_3 thin films," *Appl. Phys. Lett.* **86**, 071913 (2005).
 - T. Park, Z. Nussinov, K. R. A. Hazzard, V. A. Sidorov, A. V. Balatsky, J. L. Sarrao, S. W. Cheong, M. F. Hundley, J. S. Lee, Q. X. Jia, and J. D. Thompson, "Novel dielectric anomaly in the hole-doped $\text{La}_2\text{Cu}_{1-x}\text{Li}_x\text{O}_4$ and $\text{La}_{2-x}\text{Sr}_x\text{NiO}_4$ insulators: signature of an electronic glassy state," *Phys. Rev. Lett.* **94**, 017002 (2005).
 - L. X. Zheng, M. J. O'Connell, S. K. Doorn, X. Z. Liao, Y. H. Zhao, E. A. Akhadov, M. A. Hoffbauer, B. J. Roop, Q. X. Jia, R. C. Dye, D. E. Peterson, S. M. Huang, J. Liu, and Y. T. Zhu, "Ulralong single-wall carbon nanotubes," *Nature Materials* **3**, 673 (2004).
 - J. L. MacManus-Driscoll, S. R. Folty, Q. X. Jia, H. Wang, A. Serquis, L. Civale, B. Maiorov, M. E. Hawley, M. P. Maley, and D. E. Peterson, "Strongly enhanced flux pinning in BaZrO_3 -doped $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ coated conductors," *Nature Materials* **3**, 439 (2004).
 - Y. T. Zhu, G. W. Egeland, Y. Li, Q. X. Jia, J. Gallegos, A. Serquis, X. Z. Liao, D. E. Peterson, R. C. Dye, B. J. Roop, M. A. Hoffbauer, "Formation of pile networks by long carbon nanotubes from decomposition of CO on Co-Mo film," *J. Nanosci. Nanotech.* **4**, 189 (2004).
 - Q. X. Jia, T. M. McCleskey, A. K. Burrell, Y. Lin, G. Collis, H. Wang, A. D. Q. Li, and S. R. Folty, "Polymer-assisted deposition of metal-oxide films," *Nature Materials* **3**, 529 (2004).

